

### **Remarks**

Reconsideration is respectfully requested. Claims 1, 3-10, 12-15, 17-24, and 26-34, are in the case. Claims 2 and 16 have been cancelled.

### **Claim Amendments**

The applicant has amended claims 1 and 15 adding language including recitations previously presented in claims 2 & 3, and 16 & 17. Claims 2 and 16 have been cancelled. Claims 3 and 17 have been amended. Claims 4-6, 18-20, 24, 29 and 31 have been amended to change the claims from which they depend.

### **Claim Rejections – 35 USC § 102**

The Examiner has rejected claims 1-2, 6, 15-16, 20 and 29-30 under 35 USC 102(e) as being anticipated by Perazzo U.S. Patent No. 6,813,152. Rejections against claims 2 and 16 have been rendered moot by their cancellations.

With respect to claims 1 and 15, Applicant has amended independent claims 1 and 15 to include claim languages previously recited in claims 2-3 and 16-17. Claims 6 and 29 now depend from base claim 1, and claims 20 and 29 depend from base claim 15. Claim 30 depends indirectly from claim 15. Claims 1 and 15 are considered allowable over Perazzo because Perazzo failed to teach at least ...a first and second fan module "each including a plurality of fans arranged in a matrix array of 2xN fans positioned in a N-across by N-deep in-plane relationship wherein N fans are positioned substantially behind N other of the 2xN fans, where N is an integer equal to or greater than 2." (Underline added).

Claims 1 and 15 are further patentable over Perrazzo in view of Edmunds et al. and/or Lin et al. as discussed below in response to the examiner's rejection of claims 3 and 17 under 35 USC § 103(a).

### **Claim Rejections – 35 USC § 103(a)**

The Examiner has rejected claims 3 and 17 under 35 USC 103(a) as being unpatentable over Perazzo U.S. Patent No. 6,813,152 as applied in view of Edmunds et

al. U.S. Patent No. 6,407,918. Language encompassing the subject matter of claims 3 and 17 has been respectively added to claims 1 and 15. Specifically, claims 1 and 15 now recite "... first and second fan modules, and each including a plurality of fans arranged in a matrix array of  $2 \times N$  fans positioned in a  $N$ -across by  $N$ -deep in-plane relationship wherein  $N$  fans are positioned substantially behind  $N$  other of the  $2 \times N$  fans, where  $N$  is an integer equal to or greater than 2." Accordingly, applicant presents an argument in support of claims 1 and 15.

As mentioned, the applicant wishes to thank the examiner for the courtesy of a number of phone conferences to discuss this case, and for reviewing applicant's proposed amendment sent to the examiner via fax. During said conferences the examiner indicated he did not feel the proposed claim amendments put the claims in condition for allowance. Further the examiner brought a new reference to the attention of the applicant, US patent 6,752,587 to Lin et al. indicating, in the examiner's opinion, it further renders the claims obvious. Applicant respectfully traverses. Neither Perrazo, nor Edmunds et al., nor Lin et al. teach or suggest all of:

*a first and second fan modules, "each including a plurality of fans arranged in a matrix array of  $2 \times N$  fans positioned in a  $N$ -across by  $N$ -deep in-plane relationship wherein  $N$  fans are positioned substantially behind  $N$  other of the  $2N$  fans, where  $N$  is an integer equal to or greater than 2".*

As now recited in claims 1 and 15.

Perazzo teaches a method for improving airflow by offsetting fans in a serial arrangement. According to Perazzo, offsetting the fans provides "an open area 26 behind fan 14 through which airflow fan 14 can continue in the event of failure of fan 16." Column 4 lines 47-49. Accordingly, Perazzo teaches away from putting any fans substantially behind any other fans.

Edmunds teaches a series-parallel fan system. Edmunds suggests in column 2 line 44-45 "each fan assembly may have two sets of two fans." Edmunds does not say in this passage how the two sets of two fans are to be arranged. However, Edmunds

teaching is solely directed to an "assembly of parallel fans arranged in series with another assembly of parallel fans." Column 2, lines 14-15. Within each of Edmunds first fan assembly 32 and second fan assembly 36, (FIG. 1 for example), the fan assemblies always comprise parallel fans. Passages such as "a fan assembly comprising several fans in parallel, in series with a second fan assembly comprising several fans in parallel" are repeated numerous times through out the reference. Some examples include: col. 1 lines 29-32; col. 1, lines 43-46; col. 1, lines 60-63; col. 4 lines 42-53. Always, with Edmunds, the fan assemblies are limited to parallel fans. Nowhere in the reference does Edmund's teaching approximate:

*a first and second fan modules, "each including a plurality of fans arranged in a matrix array of  $2 \times N$  fans positioned in a  $N$ -across by  $N$ -deep in-plane relationship wherein  $N$  fans are positioned substantially behind  $N$  other of the  $2 \times N$  fans, where  $N$  is equal to or greater than 2".*

Lin et al.'s teaching is similar to Edmund's in that he teaches a first assembly having fans in parallel in series with a second assembly having fans in parallel. Lin et al. discloses fan modules in series, not series fans in any one module. FIG. 5 illustrates a first frame 11 having two parallel fans 14, and a second frame 11 having two parallel fans 12 in series with the first frame 11. Also included in the second frame 11 are stators 121 having vanes 123 each arranged in series with the fans 12. The purpose of the stators is to redirect air flow through the second modular fan assembly 11. Column 3 lines 53-59 makes this clear wherein is says:

"In operation, air is sucked into the front opening prior to leaving the second opening by passing through two parallel sets of the fans 12 and 14 wherein in each set of the fans 12 and 14 the brought in fresh air is first set up by the blades 122 to form a current of air which is in turn guided by the vanes 123 prior to passing through the blades 142 of the fan 14."

Lin et al. does not teach or suggest:

*a first and second fan modules, "each including a plurality of fans arranged in a matrix array of 2xN fans positioned in a N-across by N-deep in-plane relationship wherein N fans are positioned substantially behind N other of the 2xN fans, where N is equal to or greater than 2".*

The examiner states "It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the modular platform cooling apparatus or modular platform of Perazzo with that of Edmunds et al. for the purpose of having fans arranged in both a serial and parallel configuration". As discussed, neither reference discloses, or suggests serial fans within a fan module. And as discussed neither does Lin et al.

Respectfully, the Examiner's analysis is faulted in that it does not comply with the obviousness analysis required by Section 103 as interpreted by the Court. It is well settled that in obviousness rejections, the Examiner is to:

- 1) view the invention as a whole,
- 2) identify the difference with the prior art,
- 3) identify those of ordinary skill in the art, and
- 4) determine whether those of ordinary skill in the art will be motivated to make the modification to the prior art to arrive at the claimed invention.

In the instant case, those of ordinary skill in the art would not be motivated by the prior art standing alone to make the modifications necessary to arrive at the claimed invention. Even if such motivation existed, to try and combine the three references, applicant's invention as claimed would not result, as all the limitations, as claimed can not be found, in the sum of the references' teachings.

Furthermore, applicant respectfully notes that the Examiner has failed to provide a reference disclosing the deficiencies of the three references discussed. Therefore, the rejection under Section 103(a) appears to be based on facts within the personal knowledge of the examiner. Thus, pursuant to 37 C.F.R. § 1.104(d)(2), Applicants respectfully request that the examiner provide an affidavit supporting the unsupported

assertions made in the Office Action. Reconsideration of the examiners rejection and allowance of claims 1 and 15 is respectfully requested.

The Examiner has rejected claims 4 and 18 under 35 USC 103(a) as being unpatentable over Perazzo U.S. Patent No. 6,813,152 as applied in view of Yoshikawa U.S. Patent No. 6,222,729. Applicant respectfully traverses. At least by virtue of their direct or indirect dependence on claims 1 or 15, claims 4 and 18 should be found allowable. Reconsideration of the examiners rejection and allowance of the claims is respectfully requested.

The Examiner has rejected claims 5 and 19 under 35 USC 103(a) as being unpatentable over Perazzo U.S. Patent No. 6,813,152 as applied in view of Dent U.S. Patent No. 6,537,019. Applicant respectfully traverses. At least by virtue of their direct or indirect dependence on claims 1 or 15, claims 5 and 19 should be found allowable. Reconsideration of the examiners rejection and allowance of the claims is respectfully requested.

The Examiner has rejected claims 7 and 21 under 35 USC 103(a) as being unpatentable over Perazzo U.S. Patent No. 6,813,152 as applied in view of Houdek U.S. Patent No. 6,406,257. Applicant respectfully traverses. At least by virtue of their direct or indirect dependence on claims 1 or 15, claims 7 and 21 should be found allowable. Reconsideration of the examiners rejection and allowance of the claims is respectfully requested.

The Examiner has rejected claims 8-10, 12-14 22-24 33-34 under 35 USC 103(a) as being unpatentable over Perazzo U.S. Patent No. 6,813,152 as applied to the above claims. Applicant respectfully traverses. At least by virtue of depending from allowable base claims 1 and 15, discussed above, respective dependent claims 8-10, 12-14 22-24 33-34 should be found allowable. Such allowance is respectfully requested.

The Examiner has rejected claims 31 and 32 under 35 USC 103(a) as being unpatentable over Perazzo U.S. Patent No. 6,813,152 as applied in view of Negishi

U.S. Patent No. 6,421,238. Applicant respectfully traverses. At least by virtue of their direct or indirect dependence on claims 1 or 15, claims 31 and 32 should be found allowable. Reconsideration of the examiners rejection and allowance of the claim is respectfully requested.

### Conclusion

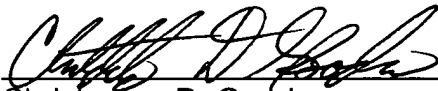
Applicant submits all the claims in the present application, specifically claims 1, 4-10, 12-15, 18-24, and 26-34, are in condition for allowance. Reconsideration of the examiners objections and rejections, and issuance of a Notice of Allowance is respectfully requested.

If the Examiner has any questions, he is invited to contact the undersigned at (503) 796-2496.

The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393.

Respectfully submitted,  
SCHWABE, WILLIAMSON & WYATT, P.C.

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